**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

# Attachment 1 to the Governing Board Resolution for Proposed Amended Rule (PAR) 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines

## Statement of Findings, Statement of Overriding Considerations and Mitigation Monitoring Plan

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**TABLE OF CONTENTS**

## INTRODUCTION

Proposed amended Rule (PAR) 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines, is a "project" as defined by the California Environmental Quality Act (CEQA) (California Public Resources Code §§21000 et seq.). The South Coast Air Quality Management District (SCAQMD) is the lead agency for the proposed project and, therefore, has prepared a Subsequent Environmental Assessment (SEA) pursuant to CEQA Guidelines §15252 and SCAQMD Rule 110. Analysis of the proposed project indicated that a Draft SEA would be the appropriate document to analyze the potential environmental impacts associated with PAR 1470 because the proposed amendments constitute substantial changes proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects (CEQA Guidelines §15162 (a)(1)).

A Draft SEA for PAR 1470 was previously circulated for a 45-day public review period from July 12, 2011 to August 26, 2011. Subsequent to release of the Draft SEA for public review, an error was discovered on the Notice of Completion (NOC) regarding how to obtain copies of the Draft SEA. As a result, SCAQMD staff withdrew the July 6, 2011 version of the Draft SEA for PAR 1470 and prepared the Revised Draft SEA to replace the July 6, 2011 Draft SEA. The Revised Draft SEA was circulated to the public for a 45-day review period from July 29, 2011, to September 13, 2011. Two comment letters were received with comments primarily related to the proposed amended rule, but also contained several CEQA-related comments. Both of the letters and individual responses to comments are included in new Appendix D, such that the CEQA document for PAR 1470 is now a Final SEA.

Subsequent to circulation of the Revised Draft SEA PAR 1470 modifications to PAR 1470 were made based on comments and other input from the regulated industry and other parties and submitted to the rule development staff. All modifications and updates were evaluated by staff and it was concluded that they did not constitute "significant new information"[1] and, therefore, did not require recirculation of the document pursuant to CEQA Guidelines §15088.5.

PAR 1470, as modified, the associated staff report, and the CEQA document for PAR 1470 were presented to the SCAQMD Governing Board at the October 2011 public hearing. As a result of public testimony made at the October 2011 public hearing, the Governing Board directed staff develop and return to the Board with a revised proposal for PAR 1470. PAR 1470 has been revised further and is to be presented to the SCAQMD Governing Board at the March 4, 2012 public hearing. The most current revisions to PAR 1470 have been incorporated into the Final

[1] Pursuant to CEQA Guidelines §15088.5, "Significant new information" requiring recirculation include, for example, a disclosure showing that:

(a) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

(b) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

(c) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.

(d) The draft EA was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

SEA for PAR 1470. Revisions have also been evaluated by staff and it was concluded that they do not constitute "significant new information" and, therefore, do not require recirculation of the Final SEA for PAR 1470 pursuant to CEQA Guidelines §15088.5.

**SUMMARY OF THE PROPOSED PROJECT**

The version of PAR 1470 presented to the Governing Board at the October 2011 public hearing would primarily affect new emergency standby engines, new direct-drive emergency standby fire pump engines and emergency standby direct-drive flood control pumps. PAR 1470 would revise the limits for NOx and hydrocarbon (HC) emissions for new emergency standby engines to eliminate the current requirement to install after-treatment controls for NOx and HC. Proposed amendments would delay PM emission compliance dates for new emergency standby engines to January 1, 2012 and narrow the applicability of the current PM standards to those engines that are located within 100 meters of a sensitive receptor or residence. For those engines with residences or sensitive receptors located beyond 100 meters, owners/operators would be required to demonstrate compliance with the health risk levels in Rule 1401(d)(1)(A) and meet particulate matter emission rates of 0.15 gram per brake horsepower or comply with the requirements for engines located at or within 100 meters of a sensitive receptor. New direct-drive emergency fire pump engines and new direct-drive flood control pump engines would not be required to install PM and NOx after treatment.

An exemption for stationary engines used at research and development for educational facilities would be incorporated into the rule. ATCM requirements for new agricultural engines would be incorporated by reference, replacing existing regulations for new agricultural engines in the existing Rule 1470. ATCM requirements for in-use agricultural engines would be incorporated by reference. Other minor changes are also proposed for clarity and consistency throughout the rule.

In response to Governing Board direction to further revise PAR 1470, staff is recommending the following modifications. Modified PAR 1470 would delay implementing Tier 4 PM emission requirements until January 1, 2013, and would narrow the applicability of Tier 4 PM requirements to those engines rated at 175 brake-horsepower or greater that are located at or within 50 meters of a sensitive receptor. Engines not subject to these requirements would be required to meet a PM emission rate limit of 0.15 gram per brake horsepower hour, which does not require PM after-treatment controls. The emission rates and effective dates for Tier 4 PM emission standards for engines located at or within 50 meters of a sensitive receptor were changed. Modifications were made to PAR 1470 to prevent circumvention of the proposed emission limits. Other modifications have been made at the request of stakeholders and to provide further clarification of the proposed requirements in PAR 1470.

**SIGNIFICANT ADVERSE IMPACTS WHICH CAN BE REDUCED BELOW A SIGNIFICANT LEVEL OR WERE CONCLUDED TO BE INSIGNIFICANT**

The Final SEA identified air quality as an area that may be adversely affected by the proposed project. The proposed project was evaluated according to the CEQA environmental checklist (CEQA Guidelines, Appendix G), which includes approximately 17 environmental topics for potential adverse impacts from a proposed project. The screening analysis concluded that the

following environmental areas would not be significantly adversely affected by the proposed project:

- aesthetics
- agriculture and forestry resources
- biological resources
- cultural resources
- energy
- geology and soils
- hazards and hazardous materials
- hydrology and water quality
- land use and planning
- mineral resources
- noise
- population and housing
- public services
- recreation
- solid/hazardous waste
- transportation/traffic

## SIGNIFICANT ADVERSE IMPACTS THAT CANNOT BE REDUCED BELOW A SIGNIFICANT LEVEL

### Project-specific Air Quality Impacts During Construction and Operation

Because construction emissions overlap with operational emission, the two were summed and compared to the operational significance thresholds. Using this approach, it was concluded that NOx emission increases and NOx emission reductions foregone (491 pounds per day) would exceed the applicable significance threshold of 55 pounds of NOx per day. Thus, it is concluded that the proposed project has the potential to generate significant adverse NOx air quality impacts from the combined construction and operational phases of the proposed project. No other criteria pollutants were shown to exceed the applicable air quality significance thresholds.

### Health Risk

Carcinogenic health risk is considered a localized impact (i.e., health risk is estimated from the concentration at individual receptors). Therefore, health risk foregone was estimated for each type of affected engine. Only health risk foregone from new emergency standby direct-drive fire pump engines (27 in one million) was estimated to exceed the SCAQMD CEQA significance threshold of 10 in one million. Therefore, PAR 1470 is expected to generate significant health risks foregone from operational activities.

### Cumulative Air Quality Impacts During Construction and Operation

In general, the analysis concluded that air quality impacts for the proposed project would be significant overlapping because NOx emission reductions foregone and NOx emission increases during operation would exceed the SCAQMD's operational significance threshold for NOx. Thus, significant adverse project-specific NOx air quality impacts are considered to be

cumulatively considerable pursuant to CEQA Guidelines §15064 (h)(1) and, therefore, cumulatively significant.

**FINDINGS**

Public Resources Code §21081 and CEQA Guidelines §15091(a) state that no public agency shall approve or carry out a project for which a CEQA document has been completed which identifies one or more significant adverse environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. Additionally, the findings must be supported by substantial evidence in the record (CEQA Guidelines §15091(b)). As identified in the Final SEA and summarized above, the proposed project has the potential to create significant adverse air quality impacts. The SCAQMD Governing Board, therefore, makes the following findings regarding the proposed project. The findings are supported by substantial evidence in the record as explained in each finding. This Statement of Findings will be included in the record of project approval and will also be noted in the Notice of Decision.

**1. Potential air quality adverse impacts cannot be mitigated to insignificance.**

Finding and Explanation: Significant adverse air quality impacts are expected as a result of adopting and implementing PAR 1470. No specific mitigation measures for operations were identified that could reduce significant adverse air quality impacts (NOx emission impacts or carcinogenic health risk reductions foregone) to less than significant. Therefore, the Governing Board finds that no feasible mitigation measures have been identified. CEQA Guidelines §15364 defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."

**2. Feasible Alternatives to the Proposed Project do not reduce adverse air quality impacts to insignificance.**

Finding and Explanation: The Governing Board finds further that in addition to the No Project Alternative, the Final SEA considered one other alternative pursuant to CEQA Guidelines §15126.6.

Alternative A – Alternative A or 'no project' means that the proposed project would not be adopted and existing Rule 1470 would remain in effect. The current universe of equipment would continue to be subject to the criteria pollutant emission limits according to the current compliance schedule. By not modifying the rule, all new stationary emergency standby engine emissions, new emergency standby direct-drive fire pump engines, new emergency standby direct-drive flood control pump engines and engines rated at equal or less than 50 brake horsepower would be required to achieve Tier 4 engine emissions requirements. Similarly, new agricultural engines would need to comply with existing Rule 1470 requirements. No exemption would be given to stationary engines used at research and development for educational facilities. Alternative A does not achieve the objectives of the proposed project that are identified in Chapter 2 of the Final EA. Alternative A may also

generate adverse environmental impacts related to the retrofit of support structures necessary for the installation of NOx and PM after treatment on emergency standby engines, direct-drive emergency standby fire pump engines, direct-drive emergency standby flood control pump engines, and engines rated less than or equal 50 brake horsepower installed in 2011 under the order for abatement. Alternative A would not have carcinogenic health risk reductions foregone impacts, since PM after treatment would be required on new emergency standby engines, direct-drive emergency standby fire pump engines, direct-drive emergency standby flood control pump engines.

Alternative B would replace Rule 1470 requirements with the CARB ATCM requirements. The CARB ATCM requirements would not require installation of additional control equipment on new stationary emergency standby engine emissions (new direct-drive emergency standby flood control pump engines are included as new emergency standby engines), new direct-drive fire pump engines, and engines rated less than 50 brake horsepower. Alternative B would provide an exemption for stationary engines used at research and development for educational facilities.

Alternative B is similar in most respects to the proposed project except as follows. Modified PAR 1470 would narrow the applicability of the 0.15 gram per brake horsepower-hour or the most current PM emission requirements of the Off-Road Compression Ignition Engine Standards for their horsepower rating requirement, whichever is more stringent, to those engines rated greater than or equal to 175 brake horsepower and located at or within 50 meters of a sensitive receptor, with the exception of schools which has its own requirements. Alternative B would have the same significant carcinogenic health risk reductions foregone impacts (carcinogenic health risk reductions foregone of 27 in one million) as the propose project, since direct-drive emergency standby fire pump engines would not need PM control under Alternative B. Consequently, the proposed project would be expected to achieve greater emissions reductions than Alternative B.

Alternative B would not meet the project objectives of continuing to provide greater health protection benefits for sensitive receptors located as effectively as the proposed project. For example, the proposed project would provide greater health protection benefits for sensitive receptors located at or within 50 meters of an affected facility by requiring these engines to meet the existing PM standards in Rule 1470 beginning in 2013. Further, Alternative B has less stringent requirement emission limits than the proposed project, which would continue existing more stringent Rule 1470 PM requirements for engines greater than or equal to 175 brake horsepower, except for engines greater than 750 brake horsepower that are required to comply with the final Tier IV off-road emission requirements.

The SCAQMD Governing Board finds further that the proposed project achieves the best balance between the adverse air quality impacts while meeting the project objectives, which are to provide regulatory relief for affected engines when necessary, and to align the rule with the CARB ATCM as much as possible without sacrificing health protective benefits for sensitive receptors where feasible. The SCAQMD further finds that all of the findings presented in these "Findings" are supported by substantial evidence in the record.

The record of approval for this project may be found in the SCAQMD's Clerk of the Board's Office located at SCAQMD Headquarters in Diamond Bar, California.

## STATEMENT OF OVERRIDING CONSIDERATIONS

If significant adverse impacts of a proposed project remain after incorporating mitigation measures or no measures or alternatives to mitigate the adverse impacts to less than significant levels are identified, the lead agency must make a determination that the benefits of the project outweigh the unavoidable adverse environmental effects if it is to approve the project. CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project (CEQA Guidelines §15093(a)). If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable" (CEQA Guidelines §15093(a)). Accordingly, a Statement of Overriding Considerations regarding potentially significant adverse impacts resulting from the proposed project has been prepared. This Statement of Overriding Considerations is included as part of the record of the project approval for the proposed project. Pursuant to CEQA Guidelines §15093(c), the Statement of Overriding Considerations will also be noted in the Notice of Decision for the proposed project.

Despite the inability to incorporate changes into the project that would mitigate potentially significant adverse impacts to a level of insignificance, the SCAQMD's Governing Board finds that the following benefits and considerations outweigh the significant unavoidable adverse environmental impacts:

1. The analysis of potential adverse environmental impacts incorporates a "worst-case" approach. This entails the premise that whenever the analysis requires that assumptions be made, those assumptions that result in the greatest adverse impacts are typically chosen. This method likely overestimates the actual adverse air quality impacts resulting from the proposed project.

2. Adopting PAR 1470 would allow the best balance between the adverse air quality impacts while meeting the project objectives.

3. SCAQMD staff agrees with CARB's assessment that after-treatment technologies for NOx, specifically selective catalytic reduction (SCR), are not suited for emergency standby engines because their typical 15 to 30 minute testing sessions do not provide sufficient available exhaust heat or allow sufficient time for the SCR catalyst to reach the elevated temperatures required to properly operate. Therefore, PAR 1470 would provide regulatory relief for emergency standby engines and new emergency standby direct-drive fire pump engines from emission limits that may require NOx control technology that may operate optimally during routine maintenance and testing.

4. The National Fire Protection Association (NFPA) requires independent third party certification of emergency engines used to drive fire pumps to ensure they meet all of the equipment, material, installation, and performance requirements NFPA standard number 20. Third party certification is done by two nationally recognized certifying agencies, Underwriter's Laboratory (UL) and Factory Mutual Research (FM) and the engines are typically referred to as UL/FM labeled. Manufacturers stated that they cannot commercially justify the cost and the commitment of resources that would be incurred to develop UL/FM certified engines to Tier 4 for such a small market. To provide regulatory relief, the emission requirements in PAR 1470 for new emergency standby direct-drive fire pump engines do not require exhaust after-treatment devices for PM or NOx emissions (excluding engines located at or within 100 meters of a school, which would be subject to the existing rule requirement of a PM limit of 0.01 g/bhp-hr). However, PAR 1470 requirements are somewhat more stringent than the NSPS requirements because direct drive fire pump engines that meet the standards of Table 2 of PAR 1470 are readily available.

5. PAR 1470 would continue to provide health protective benefits for sensitive receptors located at or within 50 meters of an affected facility by requiring these engines to meet the existing PM standards in Rule 1470 beginning in 2013 for engines greater than or equal to 175 brake horsepower, except for engines greater than 750 brake horsepower that are required to comply with the final Tier IV off-road emission requirements.

6. The SCAQMD's Governing Board finds that the above-described considerations outweigh the unavoidable significant effects to the environment as a result of the proposed project.

**MITIGATION MONITORING PLAN**

CEQA requires an agency to prepare a plan for reporting and monitoring compliance with the implementation of measures to mitigate significant adverse environmental impacts. Mitigation monitoring requirements are included in CEQA Guidelines §15097 and Public Resources Code §21081.6, which specifically state:

When making findings as required by subdivision (a) of Public Resources Code §21081 or when adopting a negative declaration pursuant to paragraph (2) of subdivision (c) of Public Resources Code §21080, the public agency shall adopt a reporting or monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment (Public Resources Code §21081.6). The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of an agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead or responsible agency, prepare and submit a proposed reporting or monitoring program.

The provisions of CEQA Guidelines §15097 and Public Resources Code §21081.6 are triggered when the lead agency certifies a CEQA document in which mitigation measures,

changes, or alterations have been required or incorporated into the project to avoid or lessen the significance of adverse impacts identified in the CEQA document. However, since no mitigation measures to minimize significant adverse impacts were identified, a mitigation monitoring and reporting plan is not required.

**CONCLUSION**

Based on a "worst-case" analysis, the potential adverse air quality impacts from the adoption and implementation of PAR 1470 are considered significant and unavoidable. PAR 1470 would result in peak daily NOx emissions increases and emissions reductions foregone of 491 pounds per day from overlapping construction and operational emission, which exceeds the SCAQMD operational NOx significant threshold of 55 pounds per day. Since operational NOx emission impacts would exceed the applicable significance threshold, PAR 1470 may contribute to an existing or projected air quality violation. Since the proposed project would result in NOx emissions increases and emissions reductions foregone from the existing Rule 1470 that exceed the operational NOx significant threshold of 55 pounds per day, it may diminish an existing air quality rule or future compliance requirement resulting in a significant increase in an air pollutant. Since carcinogenic health risk from new direct-drive emergency standby fire pump engines may exceed 10 in one million, PAR 1470 would be significant for carcinogenic health risk reductions foregone impacts. No feasible mitigation measures or project alternatives have been identified that would further reduce air quality impacts to less than significant levels, while still achieving the overall objectives of the project.